

**AMENDMENTS TO THE SPECIFICATION**

Please replace the paragraph beginning on page 17, line 25 starting with “A goal of the models” with the following amended paragraph:

A goal of the models of attention is to infer the cost of different types of interruption given that a user is of a particular attentional state. To achieve this, the present invention considers the utility,  $u(D_i, A_j)$ , capturing the cost of a user in attentional state  $A_j$  being disrupted by task or communication event  $D_i$ . This cost can be assessed as the willingness to pay to avoid a disruption in dollars for each combination. Given a set of dollar values to avoid disruptions, and a probability distribution being inferred over the attentional state of a user, an expected cost of interruption (ECI) can be computed by summing over the utilities, weighted by the likelihood of each state of attention, conditioned on the stream of incoming sensory information. That is, the ECI is

$$\left[ \begin{aligned} ECI &= \sum_j p(A_j | E) u(D_i, A_j) \end{aligned} \right] \quad \underline{ECI = \sum_j p(A_j | E) u(D_i, A_j)}$$

wherein  $p(A_j | E)$  is the probability of the attentional state, conditioned on an evidence stream  $E$ .